Remarks

Reconsideration of the application and allowance of all pending claims are respectfully requested. Claims 1-24 are now pending.

By this paper, dependent claims 3, 4, 12 & 13 are amended to address the 35 U.S.C. §112, second paragraph, rejection stated in the Office Action. Specifically, the phrase "the operation of any hardware component" has been amended to read "operation of a hardware component". Based upon this amendment, reconsideration and withdrawal of the 35 U.S.C. §112 rejection to claims 3, 4, 12 & 13 is requested.

Independent claims 1 & 10 are amended herein to specify that the turning on of the power occurs automatically again a defined period of time after stopping of the power supply to the computer when a predetermined test result of the power-on self test has been obtained. Further, the pending claims are amended to more clearly recite that the result of the power-on self test is obtained without making an operator of the computer aware of the result of the power-on self test. This further characterization of the automatically turning on function of applicants' invention is recited in new claims 23 & 24. Support for the amended and new claims can be found throughout the specification as filed including, for example, page 4, lines 5-10, & page 19, lines 1-16. No new matter is added to the application by any amendment presented.

Substantively, claims 1-22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Applicants' Admission of Prior Art (AAPA) and Urazoe et al. (U.S. Patent No. 6,058,501; hereinafter "Urazoe"). This rejection is respectfully, but most strenuously, traversed to any extent deemed applicable to the claims presented herewith.

An "obviousness" determination requires an evaluation of whether the prior art taken as a whole would suggest the claimed invention taken as a whole to one of ordinary skill in the art. In evaluating claimed subject matter as a whole, the Federal Circuit has expressly mandated that functional claim language be considered in evaluating a claim relative to the prior art. Applicants respectfully submit that the application of these standards to the

independent claims presented leads to the conclusion that the recited subject matter would not have been obvious to one of ordinary skill in the art based on the applied art.

As recited in claim 1, for example, applicants' invention comprises a method for controlling power of a computer in which at least a power-on self test for hardware is carried out before shifting into an operating system process when the power is initially turned on. The method includes obtaining a result of the power-on self test; and automatically turning on the power again a predefined period of time after stopping the power supply to the computer when a predetermined test result of the power-on self test has been obtained. Thus, in applicants' method, the computer is automatically stopped and then restarted a defined period of time after stopping when there is a predetermined test result of the power-on self test.

In an enhanced aspect, the automatically turning on of the power occurs without making an operator of the computer aware of the result of the power-on self test (e.g., see new claims 23 & 24). This allows a computer to restart itself when a problem arises in initializing the computer without making the user or operator of the computer aware of the problem. The control method recited prevents the operator from feeling unnecessarily uneasy if a power-on problem will not affect operation of the computer.

Applicants respectfully submit that a careful reading of AAPA and Urazoe fails to uncover any teaching, suggestion or implication of various aspects of applicants' above-summarized invention.

Applicants Admission of Prior Art contained in the Background of the Invention, and in particular, at page 2, lines 11-17 of the specification expresses the state of the art as follows:

> Such a power-on problem may frequently be detected through the POST
> described above and if it has been detected through the POST, the system
> indicates on the display an error code corresponding to the detected
> problem and problematic conditions and then stops the startup operation.
> Then, the user would turn off the system and then turn it on again to
> restart it with some anxiety.

A careful reading of AAPA fails to uncover any teaching, suggestion or implication of the functionality recited in applicants' independent claims 1 & 10 presented herewith. Specifically, applicants recite control processing which automatically turns on the power again after stopping the power supply to the computer when a predetermined test result of the power-on self test has been obtained. Additionally, applicants recite that this automatically turning on of the power occurs a defined period of time after the power has been stopped to the computer when the predefined test result of the power-on self test has been obtained. By automatically turning on the power, applicants are able to avoid notifying a user of the result of the power-on self test when certain predetermined test results are obtained. In comparison, the AAPA expressly states that the user must turn off the system and then turn it on again to restart it with some anxiety. Thus, in the AAPA, the user is aware that a problem has been detected by the power-on self test, and that the user must interactively attempt restarting of the computer. Applicants' invention avoids this user anxiety, and user interaction by intelligently determining that for a predetermined test result of the power-on self test, that the processing can automatically turn on the power again after stopping the power supply to the computer and after waiting a defined period of time.

For the above reasons, applicants respectfully submit that the AAPA does not address all of the functionality recited by applicants in the independent claims presented. The Office Action acknowledges that AAPA does not teach the restarting of the computer occurring only when a predetermined test result has been obtained. The Office Action cites the teachings of Urazoe and alleges that it would have obvious to one of ordinary skill in the art to combine the teachings of Urazoe with the AAPA.

Urazoe describes an error detecting device for a Viterbi decoder. An error detecting device of received digital data solves a problem for detecting errors in a conventional device in that error detection following the Viterbi decoding performed on most important bits cannot detect errors even if they include a considerable amount of errors, and that odd sounds result from decoding of voice data, for example. The error detecting device includes a Viterbi decoder for carrying out the Viterbi decoding of the received digital data, an error number decision portion for comparing a threshold value with the number of errors of the path metric obtained by the Viterbi decoding, and a voice decoder for decoding the received

digital data, on which the error number decision portion decides that the number of errors is below the threshold value.

Initially, applicants note that Urazoe does not teach the above-noted deficiencies of AAPA when applied against the amended independent claims presented. Specifically, Urazoe does not teach functionality which includes automatically turning on power to a computer after stopping the power supply to the computer when a predetermined test result of a power-on self test has been obtained. Further, Urazoe does not teach, suggest or imply that the automatically turning on of the power occurs a define period of time after the stopping of the power supply. For at least these reasons, applicants respectfully submit that the combination of Urazoe and the AAPA does not suggest to one of ordinary skill in the art their invention as recited in the independent claims presented.

Additionally, applicants respectfully traverse the Office Action's characterization of the teachings of Urazoe as being somehow applicable to the cited functionality of applicants' invention. The path metric errors that Urazoe employs are mathematical numbers that are derived from the Viterbi algorithm for voice data decoding. In its most general form, the Viterbi algorithm may be viewed as a solution to the problem of maximum a posteriori probability (MAP) estimation of the state sequence of a finite-state discrete-time Markov process observed in memoryless noise. This means that when digital data is received that is corrupted by white noise, the algorithm attempts to reconstruct the original data by calculating what values are most likely to approximate the original data. The algorithm uses "path metric", the mathematical "distance" between the correct original data sequence and the reconstructed data sequence to estimate what amount of error is expected to be in the reconstructed data. This is the "path metric" error meant by Urazoe. It is a numeric value representing the estimated deviation from the original data.

In comparison, applicants recite in their independent claims functionality which includes automatically powering on the computer again a predefined period of time after stopping the power supply responsive to receipt of a predetermined test result from the power-on self test. Applicants predetermined test result is not necessarily a numeric value, but rather an indication of occurrence of a certain type of abnormal event. More generally,

Urazoe attempts to detect data errors in transmitted voice data, introduced by communication noise, that are difficult to identify using prior art approaches. When such an error is detected, typically there will be a gap in output voice data, making the user aware of the error. In contrast, the functionality of applicants' independent claims aims to safely ignore certain transient test results obtained during power-on self testing. Further, this ignoring of transient results occurs without making the user aware that an error ever existed (see, for example, dependent claims 23 & 24). Thus, the aims of Urazoe and the present application are in fact opposite.
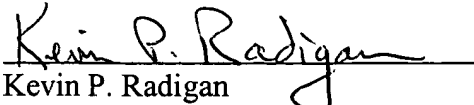
Additionally, the advantages of Urazoe and the present invention are different. The advantage of Urazoe is that it detects more errors, compared to existing voice data decoders. In contrast, the advantage of applicants' invention is that it notifies an operator of less errors. Applicants' invention reduces false alarms, letting a computer recover automatically from errors that can be worked around safely.

For all of the above reasons, applicants respectfully request reconsideration and withdrawal of the obviousness rejection stated in the Office Action, i.e., to any extent deemed applicable to the claims presented. The dependent claims are believed allowable for the same reasons as the independent claims from which they directly or ultimately depend, as well as for their own additional characterizations. For example, new claims 23 & 24 further characterize independent claims 1 & 10, respectively, by stating that the automatically turning on of the power functionality recited occurs without making an operator of the computer aware of the result of the power-on self test. As noted above, a goal of the present invention is to minimize notifying an operator that a problem has occurred during power on, and thereby minimize additional operator interaction with the computer during the power on process.

All pending claims are believed to be in condition for allowance and such action is respectfully requested.

Should the Examiner wish to discuss this case with Applicants' attorney, the Examiner is invited to contact the applicants' representative at the below-listed number.

Respectfully submitted,

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